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ABSTRACT

A constant-power brushless DC motor is provided, including a stator which is wound in parallel by phases and polarities and configured of n multi-phases, a rotor having a predetermined number of polarities, which is required to concentrate magnetic flux on its area, a commutation encoder including sensing regions and nonsensing regions, and two photo sensors set to each phase, the two photo sensors being connected to a controller, to excite only $(n-b)$ phases among n phases, starting and rotating the motor, thereby realizing a constant-power DC motor without commutator, which is effective in energy saving, has good characteristic of continuous speed conversion and compact configuration.